101-15-CR

Fish Creek
KTN

EA

2630 Habitat Improvement

December 30, 1974

Fish Creek Evaluation

Paul L. Beck, Recreation and Lands Officer

This memo serves as a follow up of an evaluation submitted on September 4, 1974.

A second field trip to the Salmon River was conducted during October 5, through October 9, 1974, by Dennis Blankenbeckler, Don Siedelman, and Jack Hills to determine the following:

1. Monitor fish run into Fish Creek, emphasizing chum salmon.

2. Map and document physical features of Fish Creek relating to improvement work after draining of Summit Lake.

3. Inspect (dike) improvement work on Salmon River.

4. Assist National Marine Fishery biologist, Jack Hills, in collection of chum salmon in Fish Creek. Length, weights, and scale samples were taken to relate size of fish to other areas in Alaska.

On October 5, 1974, chum salmon enumeration and distribution were documented on Fish Creek (Figure 1). A live chum count of 3657 was estimated at this time. Total escapement for the season is estimated 33,229. Spawning was distributed from August through mid-October. This is the estimate made by NMFS and is based on an 8-day stream life factor. See table 1 & 2 for calculations. Distribution of spawners showed 80% of the chum spawners in an area 200 yards below and 400 yards above the Fish Creek bridge (Figure 1).

This area comprises an estimated 10,000 square meters of spawning riffle. The estimated 26,583 chum spawners result in 2.6 spawners per square meters. This is considered a high spawning density. Of the 26,583 spawners, 44% utilized the riffle area 200 yards below the bridge. This area, before dike improvement, was affected by glacial water from the Salmon River. The area is characterized by upwelling and is now considered a high quality spawning area. Pre-emergent sampling in the spring will determine the actual production of this areaaand can be compared to the rest of the stream.

Aerial photos were taken on Oct. 5, 1974 to document damages to the Salmon River and Fish Creek dikes from dumping of Summit Lake in 1974. Summit Lake started draining on Sept. 8, 1974. Increased flow was evident in the Salmon River on Sept. 12, 1974. As in the past, peak flow occurred in 7 to 11 days. Total water volume emptied from the lake was small compared to past years. At the time of dumping, Summit Lake was estimated to be one-half full. Photos can be seen in the Ketchikan office. The State of Alaska Highway Department and additional photos taken by the Forest Service are available in Juneau.

Inspection of the dikes revealed no damages except at the lower reaches. Minimum damages occurred on the lower portion of the Salmon River dike. Approximately 100 yards of the lower end of the Fish Creek dike were washed away. Alteration of the Salmon River occurred near the junction with Fish Creek, with formation of new channels.

Assistance was given again to Jack Hills, National Marine Fisheries Service, to collect lengths, weights, and scale samples from approximately 250 chum salmon carcasses. Preliminary data analysis indicates large size, but possibly smaller than August sample and previous years. Results of the 1974 sampling will be available at a later date.

Other special points of interest from the Oct. 5, 1974 field trip include:

1. Numerous cars were again observed viewing the spawning salmon. Cans and garbage were noted along the Fish Creek stream bank.

2. No bears were observed along the stream. Tracks were observed in the lower portion of the stream where escape cover is present. Mallards were observed in slough areas, a pair of greenwing teal and mergansers along Fish Creek. Concentrations of herring, glaucous wing and bonaparte gulls were observed along Fish Creek. Species composition of gulls changed from work done in August when only bonaparte gulls were common. The late run of fish no doubt serves to concentrate birds that pray on spawning salmon. Fourteen eggles were also observed, compared to three in August, also suggesting a late concentration area.

3. The frog observed during the August trip was identified as a spotted frog, Rana pretiosa. This is the only report I know of in the Hyder area for the spotted frog. This information was forwarded to Robert Parker Hodge, a field naturalist interested in southeastern Alaska amphibians. Hodge works for the Point Defiance Public Aquarium in Washington and recommended collecting a specimen for the Ketchikan museum. He also recommended watching for garter snakes, which he suspects to be in the Hyder area. Pictures were taken of the frog for positive identification.

4. Closing bear hunting was discussed with Alaska Department of Fish and Game. Support was limited because of enforcement problems. Harrassment of spawning fish was discussed with A.D.F.&G., and a regulation proposed to the Board of Fish and Game not allowing snagging should help correct problems.

In summary, the habitat improvement project was a success for the 1974 salmon spawning season. The dikes prevented the silt-laden Salmon River from inundating the important chum salmon spawning areas. The spawning area below the bridge was protected from flood waters, which provided for an estimated 44% of the chum spawning area for 1974.

Recommendations.

1. Provide funds to repair the lower portions of the dike. Large rip rap should be used to insure against future damage. At least three years of maintenance should be required before reevaluating the benefits being derived.

2. Carry out recommendations submitted in memo on Sept.4, 1974 on Fish Creek evaluation not discussed in this memo.

3. Construct an information sign to be viewed by users, discussing the unique chum salmon spawning run and problems encountered with public harassment of spawning salmon.

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Table 1. --Counts of live and dead chum salmon in Fish Creek during 1974 made by foot surveys

Date	Agency*	Live chum	Dead chum
August 23	USFS and NMFS	4,990	2,350
August 29	ADF&G	8,060	5,650
September 16	ADF&G	1,070	(?)
October 5	USFS and NMFS & ADF&G	3,657	1,390

* USFS = U.S. Forest Service

NMFS = National Marine Fisheries Service

ADF&G = Alaska Department of Fish and Game

Table 2. --Calculation of total escapement of chum salmon in Fish Creek, 1974

Date	No. of days	No. of fish	No. of fish days
August 23	16	4,990	79,840.0
August 29	12	8,060	96;720.0
September 16	18-1/2	1,070	19,795.0
October 5	19	3,657	69,483.0
Total			265,838.0

$$\frac{\text{(Total no. fish days)}}{\text{(Estimated stream life)}} \quad \frac{265,838}{8}$$

Total estimated escapement = 33,229

SA - CREEK
Oct. 5, 1974
live chum - 3657
fresh carcasses - 1390
Coho -
- Dollies - several schools
MFS - sampled ≈ 250 chum

Stopped survey @ Road

(Figure 1)